What is claimed is:

1. A gas laser oscillator comprising:

an electric discharge section for generating electric discharge in gas laser medium for pumping the gas laser medium;

a power source connected to said electric discharge section, for supplying electric discharge power thereto; and

magnetic field applying means for applying magnetic field to said electric discharge section in a direction different from a direction of the electric discharge such that one of intensity and direction of the magnetic field is changeable to thereby change a lateral mode of an laser output.

2. A gas laser oscillator according to claim 1, wherein said magnetic field applying means includes coils wound around said electric discharge section and direct-current coil excitation means for flowing direct current in the coils such that the intensity of the magnetic field applied to said electric discharge section is changeable by changing magnitude of the direct current.

3. A gas laser oscillator according to claim 1, wherein said magnetic field applying means includes coils wound around said electric discharge section and alternate-current coil excitation means for flowing alternate current in the coils, such that the intensity of the magnetic field applied to said electric discharge section is changeable by changing magnitude of the alternate current.

4. A gas laser oscillator according to claim 3, wherein said magnetic field applying means synchronizes the magnetic field with the discharge current.

5. A gas laser oscillator according to claim 1, wherein a plurality of electric discharge sections are provided and said magnetic field applying means

applies magnetic field in one of the plurality of electric discharge sections in a direction different from a direction of magnetic field in another of the plurality of electric discharge sections.